

*Championing  
excellence and diversity  
in broadcasting*



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## **VLV RESPONSE TO DCMS CONSULTATION ON WIRELESS INFRASTRUCTURE STRATEGY**

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## 1 INFORMATION ABOUT THE VLV

The Voice of the Listener & Viewer Limited (VLV) represents the citizen and consumer interests in broadcasting and speaks for listeners and viewers on the full range of broadcasting issues.

VLV uses its independent expertise to champion quality and diversity in public service broadcasting, to respond to consultations, to produce policy briefings and to conduct research. VLV has no political, commercial or sectarian affiliations and is concerned with the issues, structures, institutions and regulations that underpin the British broadcasting system. VLV supports the principles of public service in broadcasting. It is a charitable company limited by guarantee (registered in England and Wales No 4407712 - Charity No 1152136)

Insofar that Broadcasting uses Spectrum to provide public services free at the point of reception, **VLV is concerned to protect these vital and valued services from potential spectrum erosion brought about by the growing demands by Mobile Data Network Operators (MNOs)** as they seek to extend their Wireless Infrastructures. In the International Telecommunications Union (ITU) mobile networks and the services they provide are described as International Mobile Telecommunications (IMT). In this response we use the term MNO for the operators of such services.

### **VLV Response:**

1. The VLV welcomes this opportunity to respond to the DCMS open consultation on its Wireless Infrastructure Strategy. Our primary concern in this response is to clarify the scope of DCMS interest in this case. In particular we wish to clarify the spectrum aspects of any strategy that will emerge from the consultation.
2. The invitation to submit evidence was accompanied by 2 letters: one to Ofcom from the DCMS dated 28th July 2021 and a response from Ofcom dated 4th August 2021.

In the former the Secretary of State makes specific reference to spectrum and to “the criticality of spectrum to future wireless networks”. VLV considers that DTT services also have a critical need for spectrum. The following lists the particular requirements that government wishes to have addressed:

- a. Ofcom’s assessment of whether the UK spectrum management framework will remain fit for purpose to enable the best outcomes for the UK, and any changes to the framework that may need to be considered, given the emerging and anticipated changes in the MNO and private network markets, networks, technology and industry ecosystem.
- b. Ofcom’s preliminary assessment of the potential spectrum requirements over the coming 15 years for mobile networks and how,

in terms of spectrum bands and mechanisms, these might be accommodated.

- c. Efficient use of spectrum: Ofcom's assessment of whether there is scope to improve the effectiveness of spectrum use in existing licensed spectrum holdings, and Ofcom's assessment of the options to do this. Ofcom's assessment of what new technological capabilities and innovations can be used to improve and modernise spectrum access and licensing, and Ofcom's plans for implementing these.
3. In recent years VLV has responded to several consultations relating to spectrum, emphasising the need to assure public service broadcasting in the terrestrial frequency bands (currently delivered via the Freeview platform). Since 2012, when digital technology (Digital Terrestrial Television, DTT) replaced an older, much less efficient analogue system of transmission, considerable amounts of spectrum have already been re-allocated from the broadcasting bands to the MNOs.

The original four analogue broadcasting services (BBC1, BBC2, ITV and Channel 4), plus, from 1997, a limited coverage for Channel 5, required a spectrum band from 470 MHz to 960 MHz, a capacity of 490 MHz. The current DTT band occupies spectrum between 470 MHz and 694 MHz, a capacity of 224 MHz, less than half the original analogue occupancy. The shift to Digital technology increased the number of services available from 5 by over an order of magnitude. Broadcasters have been technical innovators and efficient users of spectrum and have done so on their own initiative.

This reflects the considerable accommodation and improvement in spectrum efficiency that DTT has delivered by adopting state of the art technology which was pioneered in the UK and developed with European and other partners since 1990.

It is expected that the MNOs will be required to take initiatives and to be at least equally inventive and efficient in exploiting the spectrum they already occupy as well as any new allocations obtained during future WRCs.

4. Furthermore broadcasters have agreed to share the current DTT spectrum band with White Space services. Because of the nature of the allocation of spectrum to DTT transmitters, both main and local relays, there are spaces in each DTT service area that support low power transmissions suitable for local services.
5. Despite these contributions by broadcasters to support spectrum efficiency the MNOs continue to demand more spectrum including that which remains allocated to broadcasting. This pressure has been and remains consistent and extends across Europe leading to an extra powerful dimension to MNO demands. If the MNOs succeed then not only do DTT services suffer or even disappear, but White Space usage is also threatened.

6. In recent months government has conducted a broad review of the role of public service broadcasting in the UK, extending from the role of the BBC to the allocation of spectrum and multiplex licences to the transmission infrastructure. Spectrum is also critical to the future of terrestrial public service broadcasting. VLV has contributed responses to consultations arising from this review striving to convince government of the value of PSB to citizens and consumers. VLV is heartened by encouraging responses from government that the importance of terrestrial PSB is recognised, for example, by the extension of DTT multiplex licences to 2033, an allocation that implies continued use of the associated spectrum.
7. In light of the above, VLV is concerned to obtain assurance from government that the spectrum aspects of the present consultation are confined purely to the spectrum bands already allocated to the MNOs and that any new allocations will not encroach upon spectrum currently used by DTT.
8. The Review looks to define wireless policy over the next decade. VLV has concerns about the forthcoming World Radio Conference (WRC23 to be held in November 2023) at which the matter of re-allocation of current DTT spectrum will surely arise. Documents are already in circulation in preparation for this event and these include items carried forward from WRC15 and WRC19. Agenda item 1.5 records an action:
  - “to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 [see Note 1 below] and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review in accordance with Resolution 235 (WRC-15)”

This clearly demonstrates that the security of DTT spectrum (the 470-694 MHz band) is by no means guaranteed.

Items 1.2 to 1.4 relate to those other spectrum bands that may be allocated to MNOs. Note that the DTT band comprises 224 MHz but the total under consideration elsewhere is 1,700 MHz - see Note 2 below – 7.6 times the DTT spectrum.

9. One aim of the MNOs at least is to achieve “Co-Primary” status in the DTT band which would allow all national regulators to permit MNOs to have equal access rights to it. The frequency planning issues arising from a decision that allows Co-Primary status between MNOs and DTT in Europe are not trivial and could have disastrous consequences for the availability of free to air broadcasting.

A fundamental requirement of MNO services is that they are universally available in a given region to allow universal roaming – this implies an “all or nothing” spectrum allocation policy. Co-Primary in practice means that if some national regulators in Europe choose to allocate the DTT spectrum band to MNOs, and others not, there will be loss of universal MNO service as well as Cross Border interference concerns which must be managed very

carefully. This is a planning matter that broadcasters are fully aware of having been dealing with it for decades. This situation is made more complex by the different network topologies, Quality of Service and Public Value criteria that apply to MNO and DTT.

10. Given the vital and highly valued role of DTT services, VLV expects that the UK will defend these services against further erosion.

## Notes

- 1 Region 1 comprises Europe, Africa, the former Soviet Union, Mongolia, and the Middle East west of the Persian Gulf, including Iraq.

- 2 WRC23 agenda items 1.2 to 1.4:

Item 1.2 *to consider identification of the frequency bands 3300-3400 MHz, 3600-3800 MHz, 6425-7025 MHz, 7025-7125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 245 (WRC-19);*

This potential provision amounts to 1,500 MHz, in bands that are highly suitable to cellular networks especially those operating in urban areas.

Item 1.3 *to consider primary allocation of the band 3 600-3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions, in accordance with Resolution 246 (WRC-19);*

This contributes a further 200 MHz.

Item 1.4 *to consider, in accordance with Resolution 247 (WRC-19), the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level;*

This permits coverage benefits that enhance terrestrially based transmission equipment, thereby improving spectrum efficiency without additional spectrum resource.